

Application No.: 10/581,140

Filing Date: May 30, 2007

Applicants: Joseph D. Buxbaum and Nicolas Ramoz

### Remarks

Claims 1-3 are pending in the subject application. By this amendment, Claim 1 has been amended to further clarify applicants' invention. The amendments to Claim 1 do not introduce new matter. Accordingly, entry of the claim amendments is respectfully requested.

### 35 U.S.C. 112, Second Paragraph Rejection

In the Office Action, Claims 1-3 were rejected under 35 U.S.C. 112, second paragraph. Claim 1 has been amended to provide a nexus between the preamble and the process steps. In view of this amendment, this rejection is believed to be moot. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

### 35 U.S.C. 112, First Paragraph Rejection

Claims 1-3 were rejected under 35 U.S.C. 112, first paragraph, for allegedly failing to comply with the enablement requirement. This rejection is respectfully requested.

Claim 1, as amended, is directed to a method of evaluating whether a human may be at risk for autism, the method comprising determining the human's genotype at polymorphism sites rs2056202 and/or rs2292813 of the SLC25A12 gene, wherein the presence of a G at either of the two sites indicates the human may be at risk for autism. Applicants submit that the claimed invention is enabled by the specification and working examples as filed. In this regard, the working examples demonstrate that the presence of a G at either of polymorphism sites rs2056202 and rs2292813 of the SLC25A12 gene, is indicative that a human may be at risk for autism. (see, Examples 1 and 2).

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In response to the Examiner's citation of Chien et al. (2010), Correia et al. (2006), Rabionet et al. (2006) and Blasi et al. (2006), Chien states on page 189 that the association of the rs2056202 and rs2292812 SNPs of the SLC25A12 gene with autism has been replicated in an Irish sample (citing to Segurando et al., 2005), and in a Finnish sample (citing to Turunen et al., 2008). Chien also refers to Silverman et al. (2008) as reporting that rs2056202 of the SLC25A12 gene was associated with routine and ritual behaviors in autism. Chien concluded that "taken together, these studies support that the SLC25A12 gene is a risk gene for autism." (Emphasis added) (Chien, p. 189). Although Chien did not find an association in its sample of Han Chinese subjects from Tawain, Chien stated that "heterogeneity of the genetic etiology of autism in different populations" may account for the differences seen in various studies. (Chien, p. 191). Similarly, Rabionet suggested that "population differences could account for the different results." (Rabionet, p. 931). For the Examiner's convenience, copies of the Segurando et al. (2005), Turunen et al. (2008) and Silverman et al. (2008) publications, are attached.

It is respectfully submitted that the claimed invention is enabled by the application as filed. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

#### Conclusion

In view of the preceding amendments and remarks, applicants respectfully request that the Examiner reconsider and withdrawal of the various rejections set forth in the Office Action, and submit that the application is now in condition for allowance.

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No fee, other than the \$555 three month extension of time fee, is deemed necessary in connection with the filing of this Amendment. However, if this fee is in any way deficient, or if any additional fee is required to preserve the pendency of the subject application, authorization is hereby given to charge any such fee to Deposit Account No. 01-1785.

Respectfully submitted,  
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